

REVIEW AND COMMENT RECORD1. Page 1 of 4

2. Date: April 20, 1993

3. Document No./Title: Technical Memorandum No. 4, Surface Soil Sampling Plan for the Ash Pits Area: Operable Unit 5
March, 1993

Reviewer's Name: Agency: DOE Headquarters Date: April 6, 1993

Item	Comment(s)	Disposition	Status
1. GENERAL COMMENTS	One of our major concerns is the radionuclide sampling methodology. The plan indicates that the sampling has been divided into two separate events: (1) a semi-random sampling done in conjunction with metals sampling and, (2) a radiation hot spot sampling to be performed after the radiation survey results are completed. The plan, however, does not discuss if or how radionuclide data from these two events will be integrated, or how the potential for duplicate efforts and unnecessary samples will be avoided. It is recommended all radionuclide sampling be deferred until after the survey results are available so that the sampling can be treated in an integrated manner.	Page 20, first paragraph states: "An addendum to this Technical Memorandum will be issued after the HPGE and FIDLER surveys are completed. The addendum will provide details for the radiation anomaly sampling plan and describe how the radiological samples collected during the first round of sampling will be integrated with radiological samples collected during the second round of sampling."	Comment acknowledged
2. GENERAL COMMENTS	Our second concern is regarding the area called Surface Disturbance south of the Ash Pits, which was included in the previous version of this TM and appears to have been dropped entirely from consideration in this document. Any justification or explanation which clarifies the deletion of this area should be presented.	Surface soil sampling at the surface disturbances south of the ash pits is discussed in Technical Memorandum 10. Because the subject of Technical Memorandum 4 is surface soil sampling in IHSS 133 we have deleted references to activities that will take place at the surface disturbances south of the ash pits.	Comment accepted

ADMIN RECORD

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1. SPECIFIC COMMENTS	Section 3.1, page (p.) 16, fourth paragraph: Recommended that all radionuclide sampling be planned and performed in one event. If this recommendation is not implemented, please state how the surface soil sampling plan for anomalies that is referred to here will be handled; e.g., another Technical Memorandum.	Page 20, first paragraph states: "An addendum to this Technical Memorandum will be issued after the HPGE and FIDLER surveys are completed. The addendum will provide details for the radiation anomaly sampling plan and describe how the radiological samples collected during the first round of sampling will be integrated with radiological samples collected during the second round of sampling."	Comment accepted

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2. SPECIFIC COMMENTS	Section 3.1, p. 16-21: The equation used to estimate the number of samples and the discussion throughout this section imply that the intent is to average both the random and the biased samples into one Operable Unit (OU) wide exposure point concentration for risk assessment. It is not clear or from a remedial decision point of view, averaging sample results over the entire area may "dilute" results downwind from a particular Individual Hazardous Substance Site that might otherwise warrant cleanup or it might indicate that cleanup is necessary over the entire OU due to a high contribution to the average from one hot spot. Recommend that further consideration and discussion be given to how the sample results will be used.	The equation to estimate the number of samples was used to provide a reference point, since no historical data are available for more accurate estimation. The primary intent of this sampling plan is to identify elevated concentrations of metals and confirm the results of the HPGe surveys for radionuclides in surface soils. A secondary intent is to use the samples as an OU wide exposure point concentration for risk assessment only if no elevated concentrations are identified and the calculated power is in acceptable range. If elevated concentrations are found, then further sampling and characterization will be done before a preliminary risk assessment is completed. If no elevated concentrations are found, (since the sampling plan is biased to find elevated concentrations) the population can be assumed to be in "random order" and the estimates of the mean, variance, confidence limits, etc. will be identical to a random sampling plan. Page 16, paragraph 1 and page 22, paragraph 2 include excerpts from above.	Comment acknowledged

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3. SPECIFIC COMMENT	Section 3.1, page 19, first and second paragraphs: Please clarify the reference to the Environmental Protection Agency (EPA) 1990; there is no such reference in the reference list. The second paragraph refers to EPA 1989 while the reference list has EPA 1989a and EPA 1989b. Please clarify which is intended here.	Page 30, Section 4.0 has been revised to include the reference EPA, 1990. The reference to EPA, 1989 has been revised to EPA, 1989a.	Comment accepted
4. SPECIFIC COMMENT	Section 3.1, p. 21, first paragraph: In past versions of this text, characterization of releases from an incinerator stack was used as one of the primary reasons for surface soil sampling. No mention of this potential source is made in this section. The sampling as planned appears adequate to address releases from the incinerator. The reasons for not considering the stack as a potential source and the results of its releases not needing characterization should be given.	Page 23, first paragraph states: "The remaining eleven samples were randomly selected throughout the IHSS 133 area to evaluate potential windborne contamination from the incinerator stack, ash pits and ash pit delivery routes."	Comment accepted